

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P223473

Luminaire Tested: **LD2B20D010 EU2B20NFL258027 2LBD*MW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P223473
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (155)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD2B20D010 EU2B20NFL258027 2LBD*MW
Description: 2000 Lumen, 2inch Portfolio LED Downlight
NARROW FLOOD OPTIC
SPUN ROUND TRIM WITH MATTE WHITE FINISH
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1807.3 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 0.39 / 0.39 / 0.35
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

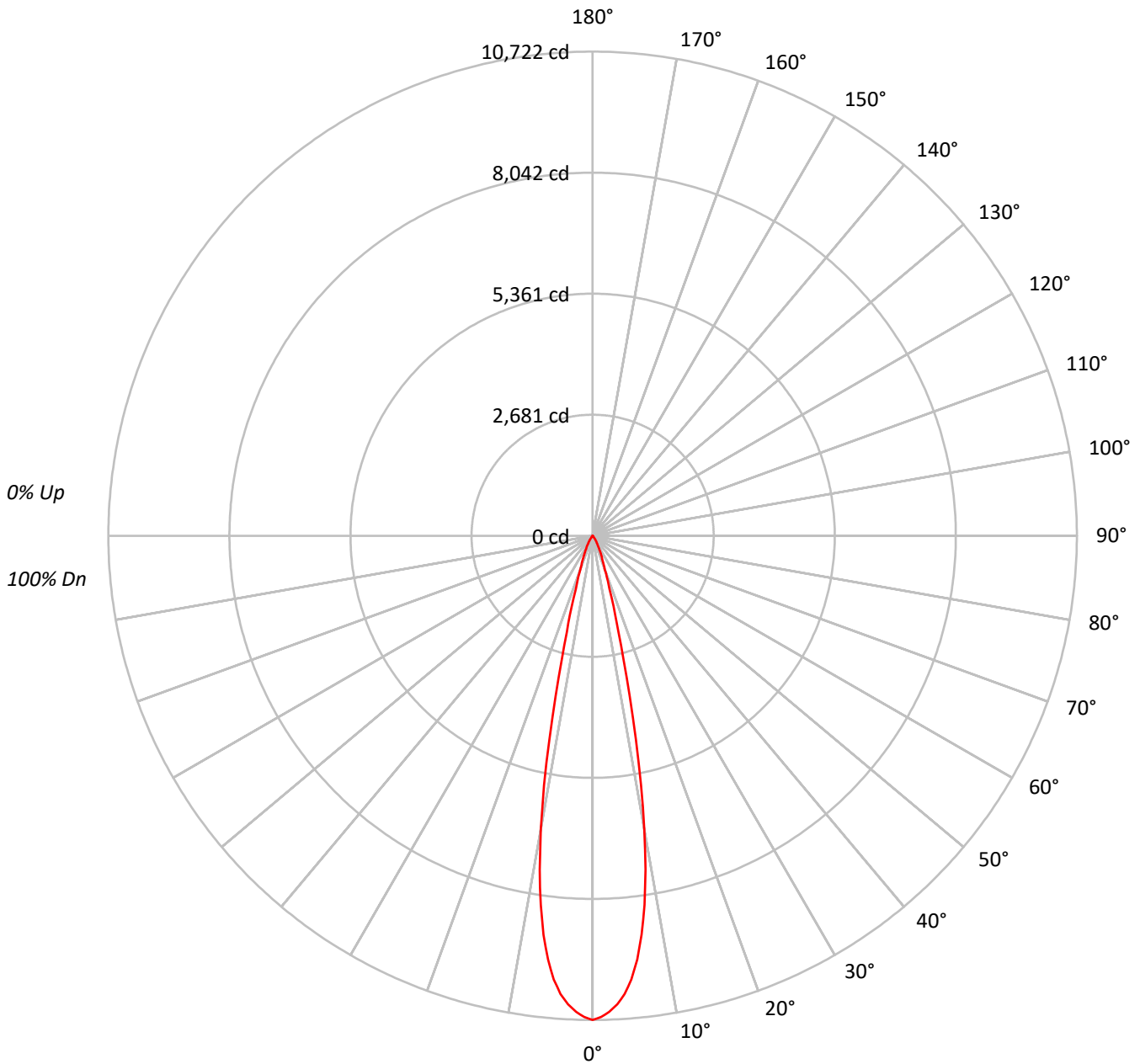
Input Watts (W): 20.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | | | 0 | |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | 100 | 100 | 100 |
| 1 | 115 | 113 | 112 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 100 | 99 | 97 | 97 | 97 | 97 |
| 2 | 112 | 109 | 106 | 104 | 110 | 107 | 104 | 102 | 104 | 102 | 100 | 101 | 99 | 98 | 98 | 97 | 96 | 95 | 95 | 95 | 95 |
| 3 | 109 | 105 | 101 | 99 | 107 | 103 | 100 | 98 | 101 | 98 | 96 | 99 | 97 | 95 | 96 | 95 | 93 | 92 | 92 | 92 | 92 |
| 4 | 106 | 101 | 97 | 95 | 104 | 100 | 97 | 94 | 98 | 95 | 93 | 96 | 94 | 92 | 95 | 93 | 91 | 90 | 90 | 90 | 90 |
| 5 | 103 | 98 | 94 | 91 | 102 | 97 | 94 | 91 | 95 | 92 | 90 | 94 | 91 | 89 | 93 | 90 | 89 | 88 | 88 | 88 | 88 |
| 6 | 101 | 95 | 91 | 89 | 99 | 94 | 91 | 88 | 93 | 90 | 88 | 92 | 89 | 87 | 91 | 88 | 87 | 86 | 86 | 86 | 86 |
| 7 | 98 | 92 | 89 | 86 | 97 | 92 | 88 | 86 | 91 | 88 | 85 | 90 | 87 | 85 | 89 | 86 | 85 | 84 | 84 | 84 | 84 |
| 8 | 96 | 90 | 86 | 84 | 95 | 90 | 86 | 84 | 89 | 86 | 83 | 88 | 85 | 83 | 87 | 85 | 83 | 82 | 82 | 82 | 82 |
| 9 | 94 | 88 | 84 | 82 | 93 | 88 | 84 | 82 | 87 | 84 | 82 | 86 | 83 | 81 | 85 | 83 | 81 | 80 | 80 | 80 | 80 |
| 10 | 92 | 86 | 82 | 80 | 91 | 86 | 82 | 80 | 85 | 82 | 80 | 84 | 82 | 80 | 84 | 81 | 79 | 79 | 79 | 79 | 79 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 4153124 |
| 5° | 3834676 |
| 10° | 2595567 |
| 15° | 883064 |
| 20° | 324323 |
| 25° | 171939 |
| 30° | 88380 |
| 35° | 41234 |
| 40° | 13501 |
| 45° | 6847 |
| 50° | 3194 |
| 55° | 1216 |
| 60° | 1394 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 838.9 | 46.4 |
| 10°-20° | 705.4 | 39.0 |
| 20°-30° | 193.6 | 10.7 |
| 30°-40° | 56.4 | 3.1 |
| 40°-50° | 10.4 | 0.6 |
| 50°-60° | 2.4 | 0.1 |
| 60°-70° | 0.2 | 0.0 |
| 70°-80° | 0.0 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 1737.8 | 96.2 |
| 0°-40° | 1794.3 | 99.3 |
| 0°-60° | 1807.1 | 100.0 |
| 0°-90° | 1807.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1807.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 10722 | |
| 5° | 9862 | 839 |
| 15° | 2202 | 705 |
| 25° | 402 | 194 |
| 35° | 87 | 56 |
| 45° | 12 | 10 |
| 55° | 2 | 2 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|---------|
| 0° | 10722.0 |
| 1° | 10659.7 |
| 2° | 10549.4 |
| 3° | 10390.9 |
| 4° | 10173.7 |
| 5° | 9862.2 |
| 6° | 9436.7 |
| 7° | 8904.5 |
| 8° | 8254.7 |
| 9° | 7487.4 |
| 10° | 6599.1 |
| 11° | 5625.4 |
| 12° | 4612.4 |
| 13° | 3645.8 |
| 14° | 2821.6 |
| 15° | 2202.1 |
| 17.5° | 1242.6 |
| 20° | 786.8 |
| 22.5° | 560.8 |
| 25° | 402.3 |
| 27.5° | 284.8 |
| 30° | 197.6 |
| 32.5° | 138.9 |
| 35° | 87.2 |
| 37.5° | 35.6 |
| 40° | 26.7 |
| 42.5° | 19.6 |
| 45° | 12.5 |
| 47.5° | 7.1 |
| 50° | 5.3 |
| 52.5° | 3.6 |
| 55° | 1.8 |
| 57.5° | 1.8 |
| 60° | 1.8 |
| 62.5° | 0.0 |
| 65° | 0.0 |
| 67.5° | 0.0 |
| 70° | 0.0 |
| 72.5° | 0.0 |
| 75° | 0.0 |
| 77.5° | 0.0 |
| 80° | 0.0 |
| 82.5° | 0.0 |



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CANDELA DISTRIBUTION (continued):

0°
90° | 0.0



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— 0°-180°







| | | |
|-------|--|-----|
| 85° | | 0.0 |
| 87.5° | | 0.0 |



(END OF REPORT)